

Bariatric surgeries performed in Brazil, 2011-2019

Cirurgias bariátricas realizadas no Brasil, 2011-2019

Cirugías bariátricas realizadas en Brasil, 2011-2019

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REVISA

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RESUMO

Objetivo: Analisar a frequência de implementação de cirurgias bariátricas (CB) realizadas no "Brasil" entre os anos de "2011 a 2019", ou seja, nove (09) anos. **Método:** Estudo exploratório, descritivo e de abordagem quantitativa. Os dados foram extraídos junto a Sociedade Brasileira de Cirurgia Bariátrica e Metabólica (SBCBM). Foi implementada análise estatística do tipo descritiva. Os resultados foram apresentados por meio de tabelas explicativas e de gráficos. **Resultados:** Foi identificado o universo de 493.212 CB realizadas, com média e desvio padrão de (54.801±11.300,2). O ano de 2019 registrou a maior preponderância com 13,9% (n=68.530) e 2011 registrou a menor preponderância com 7% (n=34.629). Foram identificadas 79,9% (n=394.101) CB financiadas pelos Planos de Saúde, 15,3% (n=75.624) pelo SUS e 4,8% (n=23.487) por instituições particulares. **Considerações finais:** Foi verificado aumento na frequência de registros de CB realizadas no recorte geográfico e histórico analisados.

Descritores: Obesidade; Obesidade mórbida; Cirurgia bariátrica.

ABSTRACT

Objective: To analyze the frequency of implementation of bariatric surgery (CB) performed in "Brazil" between the years "2011 to 2019", that is, nine (09) years. **Method:** Exploratory, descriptive study with a quantitative approach. The data were extracted from the Brazilian Society of Bariatric and Metabolic Surgery (SBCBM). Descriptive statistical analysis was implemented. The results were presented using explanatory tables and graphs. **Results:** The universe of 493.212 CB performed was identified, with a mean and standard deviation of (54,801±11,300.2). The year 2019 registered the highest preponderance with 13.9% (n=68.530) and 2011 registered the lowest preponderance with 7% (n=34.629). 79.9% (n=394.101) CB were financed by Health Plans, 15.3% (n=75.624) by SUS and 4.8% (n=23.487) by private institutions. **Final considerations:** There was an increase in the frequency of CB records made in the analyzed geographical and historical section.

Descriptors: Obesity; Morbid obesity; Bariatric surgery.

RESUMEN

Objetivo: Analizar la frecuencia de implementación de la cirugía bariátrica (CB) realizada en "Brasil" entre los años "2011 a 2019", es decir, nueve (09) años. **Método:** Estudio exploratorio, descriptivo con enfoque cuantitativo. Los datos fueron extraídos de la Sociedad Brasileña de Cirugía Bariátrica y Metabólica (SBCBM). Se implementó un análisis estadístico descriptivo. Los resultados se presentaron mediante tablas explicativas y gráficos. **Resultados:** Se identificó el universo de 493,212 CB realizados, con una media y desviación estándar de (54,801±11,300.2). El año 2019 registró la mayor preponderancia con 13,9% (n=68.530) y 2011 registró la menor preponderancia con 7% (n=34.629). 79,9% (n=394,101) CB fueron financiados por Planes de Salud, 15,3% (n=75,624) por SUS y 4,8% (n=23,487) por instituciones privadas. **Consideraciones finales:** Hubo un aumento en la frecuencia de registros de CB realizados en el tramo geográfico e histórico analizado.

Descritores: obesidad; Obesidad morbida; Cirugía bariátrica.

ORIGINAL

Introduction

Obesity is understood as a chronic disease, characterized by high body weight, resulting from the accumulation of adipose tissue, i.e., fat, related to body mass index (BMI) equal to or greater than 30.¹ Its cause is considered by several researchers as multifactorial, depending on the interaction of several factors, such as behavioral, cultural, genetic, metabolic and still social, and its prevalence has grown very sharply in recent decades, especially in developing countries.¹⁻³

According to the World Health Organization (WHO), since 1975, the problem of obesity has almost tripled worldwide and in 2016, approximately 1.9 billion adults were in the age group of 18 years or older, could be classified, because they are overweight and more than 650 million people, obese.^{2,3} In this context, the vast majority of the world's population lives in nations where, the issue of overweight and morbid obesity, are responsible for reathing more people's lives than the phenomenon of reduced body weight.³

Also in 2016, approximately 39% of adults who were 18 years or older were overweight and also 13% could be classified as obese.²⁻³ The complexity of this disease is such that, several health problems are related to it, such as high BMI, as an important risk factor for non-communicable chronic diseases (NCDs), cardiovascular diseases, especially heart disease and also acute myocardial infarction (AMI), which were the main cause of death in 2012.³⁻⁴

Other diseases are also related to obesity such as hypertension (AH), diabetes mellitus (DM), metabolic syndrome (MS), obstructive sleep apnea (OSAS), insulin hormone resistance, musculoskeletal disorders, especially osteoarthritis, some neoplasms such as colon, endometrium, liver, breast, ovaries, prostate, kidneys, gallbladder, in addition to reducing quality of life (QoL).²⁻⁵ The complexity of obesity is such that it is described in the scientific literature, and it is verified that people with it are more predisposed or even in the risk group for the acquisition of COVID-19.⁶⁻⁸

In May 2020, Latin America (LA) was classified as the epicenter of the COVID-19 pandemic, which was understood as a region affected by various disparities and social differences, such as inadequate nutrition of people, poor access to various health mechanisms and services, and also, due to the high prevalence of NCDs.⁹ Thus, the issue of obesity and its related comorbidities are increasingly prevalent in LA, and in this sense, with the more accelerated expansion in people who are in a situation of social vulnerability, with reduced financial income, among other weaknesses, allowed this disease to be more easily associated with increased severity of COVID-19, in addition to the emergence of direct and indirect complications and death.⁹

As a way to combat and control obesity and morbid obesity, bariatric surgery (CB) emerges as a strategy and help technique in people with this disease and its various comorbidities strongly described, nationally and internationally.¹⁰⁻¹¹ For other researchers, this surgical procedure through its restrictive, disabsorptive and mixed techniques is currently the only treatment that leads to a reduction in sustained and prolonged body mass, in addition to reduced morbidity and mortality, improved self-esteem and QOL.¹⁰⁻¹³

As a way to combat and control overweight and obesity in all its manifestations, the Ministry of Health (MS) in Brazil instituted by Ordinance number 2,246/2004, basic guidelines for the implementation of Food and Nutrition Surveillance Actions, within the framework of basic health actions

(ABS) of the Unified Health System (SUS), throughout the national territory.¹⁴ Through Ordinance 424/2013, the Ministry of Health redefined the guidelines for the organization of the prevention and treatment of overweight and obesity, as a priority care line of the Health Care Network for People with Chronic Diseases.¹⁵

By Ordinance 425/2013 the Ministry of Health established the technical regulation, standards and criteria for high complexity care to individuals with obesity.¹⁶ By ordinance number 482/2017, the Ministry of Health included THE by Laparoscopy in the Table of Procedures, Medicines, Orthotics, Prostheses and Special Materials of the SUS and, by Ordinance number 3,411/2019, the Overweight and Obesity Care Line is approved, enabling health facilities such as a High Complexity Care Unit for Individuals with Obesity, in the states of Amazonas (AM), Federal District (DF), Minas Gerais (MG), Piauí (PI), Paraná (PR) and Sergipe (SE).¹⁷⁻¹⁸ In this sense, the objective of this research was to analyze the frequency of CB performed in the geographical section formed by "Brazil", in the historical cut-off formed by the years "2011 to 2019", that is, nine (09) years.

Method

This is an exploratory, descriptive and quantitative study. The data were systematically extracted from the electronic portal of the Brazilian Society of Bariatric and Metabolic Surgery (SBCBM), next to the electronic address [<https://www.sbcm.org.br/>]. Electronic bibliographic surveys were carried out, together with national and international computerized databases, the same being the Virtual Health Library (VHL), Google Scholar (Google Scholar), Saber-USP, Minerva-UFRJ, the Institutional Repository-CEUB (RI-CEUB), the Institutional Repository of UnB (RI-UnB) and the Theses-FIOCRUZ, thus acquiring articles from scientific journals, academic productions (course completion papers – TCC, doctoral thesis), official documents, ordinances of the Ministry of Health and related legislation.

The Descriptors in Health Sciences (DeCS) of the VHL, the same "Obesity" with the Identifier DeCS "9951" and the ID of the descriptor "D009765", "Obesity Management" with the identifier DeCS "57174" and the ID of the descriptor "D000073319", "Morbid obesity" with the identifier DeCS "19272" and ID of the descriptor "D009767", "Bariatric surgery" with Identifier DeCS "51221" and ID of the descriptor "D050110", "Gastroplasty" with the Identifier DeCS "23642" and the ID of the descriptor "D015391", "Gastric derivation" with the identifier DeCS "23640" and the ID of the descriptor "D015390", "Jejunioileal derivation" with the Identifier DeCS "24255" and the ID of the descriptor "D007581", "Lipectomy" with the identifier DeCS "23742" and the ID of the descriptor "D015187".

For the process of association and conjugation of the selected descriptors, boolean logic operators of research "and", "or" and "not" were used, according to the methodology proposed by EBSCO Connect, available at the e-portal address: https://connect.ebsco.com/s/article/Pesquisa-com-Operadores-Booleanos?language=en_US

The data acquired from SBCBM form organized with the Microsoft Excel 2016software®, belonging to the Office 2016® for Windows®, thus being possible to implement statistical analysis of descriptive type, being performed the percentage calculations (%), mean (Me) and standard deviation (σ). The results were presented by means of two (02) explanatory tables and three (03) figures. The authors declare that there are no conflicts of interest.

Results

In the process of organizing and analyzing the data, we identified the universe of 493,212 bariatric surgical procedures performed in Brazil, health plans, SUS and also private, between the years 2011 to 2019, as shown in table 1. The year 2011 recorded the lowest preponderance of the historical and geographic section analyzed accounting for 7% (n=34,629) and 2019 recorded the highest preponderance with 13.9% (n=68,530).

Table 1 - Distribution of the universe of CB recorded by year, percentage, minimum value, maximum value, mean and standard deviation, in Brazil, 2011-2019 (n=493.212): ** ** ** **

Year	f	%	Minimum value	Maximum value	Me	Sd
2019	68.530	13,9	34.629	68.530	54.801	11.300,2
2018	63.969	13				
2017	61.283	12,4				
2016	62.227	12,6				
2015	58.686	11,9				
2014	53.156	10,8				
2013	50.321	10,2				
2012	40.411	8,2				
2011	34.629	7				
Total	493.212	100				

Source: Adapted from MS and SBCBM, 2021.

* The data presented are faithful to the institutions available.

** CB is an operative procedure that is currently being developed in great frequency due to several factors and, thus, variation(s), updating(ões) and expansion(ões) in its values exposed in the present study may occur.

f = frequency.; % = percentage.; Me = average.; SD = standard deviation.

In the geographic and historical section analyzed, it was also verified mean and standard deviation of (54,801±11,300.2). Table 2 shows the distribution of CB registered by health plans, SUS and individuals per year in Brazil from 2011 to 2019.

Table 2 - Distribution of CB recorded by health plans, the Unified Health System and P=private individuals per year, in Brazil, 2011-2019 (n=493.212):** ** **

Year	Health Plan	%	SUS	%	Particulars	%	Total	%
2019	52.699	13,4	12.568	16,6	3.263	13,9	68.530	13,9
2018	49.521	12,6	11.402	15,1	3.046	13	63.969	13
2017	48.299	12,3	10.064	13,3	2.920	12,4	61.283	12,4
2016	50.443	12,8	8.821	11,7	2.963	12,6	62.227	12,6
2015	48.350	12,3	7.541	10	2.795	11,9	58.686	11,9
2014	43.600	11,1	7.025	9,3	2.531	10,8	53.156	10,8
2013	41.123	10,4	6.802	9	2.396	10,2	50.321	10,2
2012	32.456	8,2	6.031	8	1.924	8,2	40.411	8,2
2011	27.610	7	5.370	7,1	1.649	7	34.629	7
Total	394.101	100	75.624	100	23.487	100	493.212	100

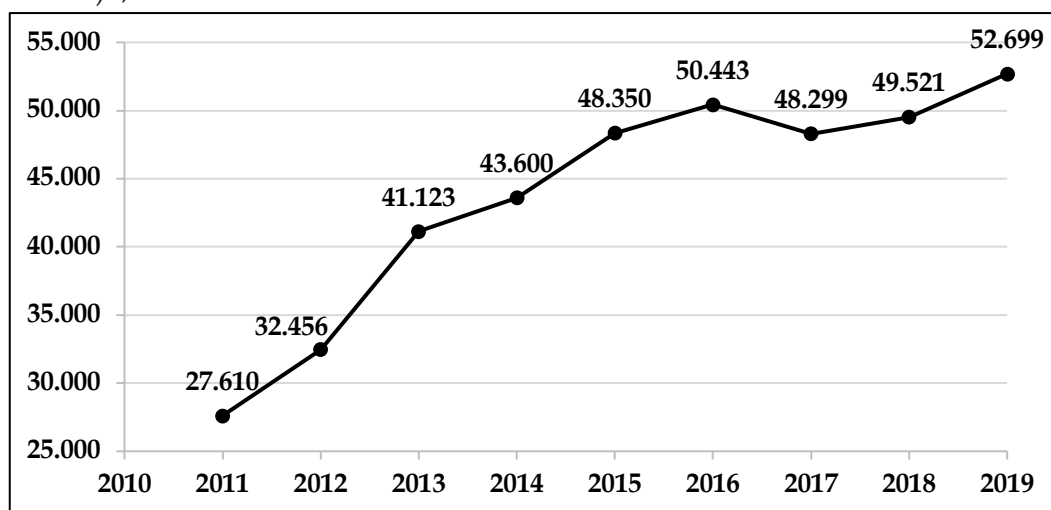
Source: Adapted from MS and SBCBM, 2021.

* The data presented are faithful to the institutions available.

** CB is a surgical procedure that is currently being developed in great frequency due to several factors and, thus, variation(s), updating(ões) and expansion(ões) in its values exposed in the present study./ *** SUS = Unified Health System.

In the process of organizing and analyzing the data, it was also possible to identify that in the identified BC, 79.9% (n=394,101) were implemented by the Health Plans, 15.3% (n=75,624) by the SUS and 4.8% (n=23,487) privately. Figure 1 shows the distribution of CB recorded by health plans, per year, in the geographical and historical context established in this research, and increasing ascent is identified. The year 2019 recorded the highest preponderance with 13.4% (n=52,699) and the year 2011 the lowest with 7% (n=27,610).

Figure 1 - Distribution of CB registered by health plans, per year, in Brazil, 2011-2019 (n=394.101):*,**



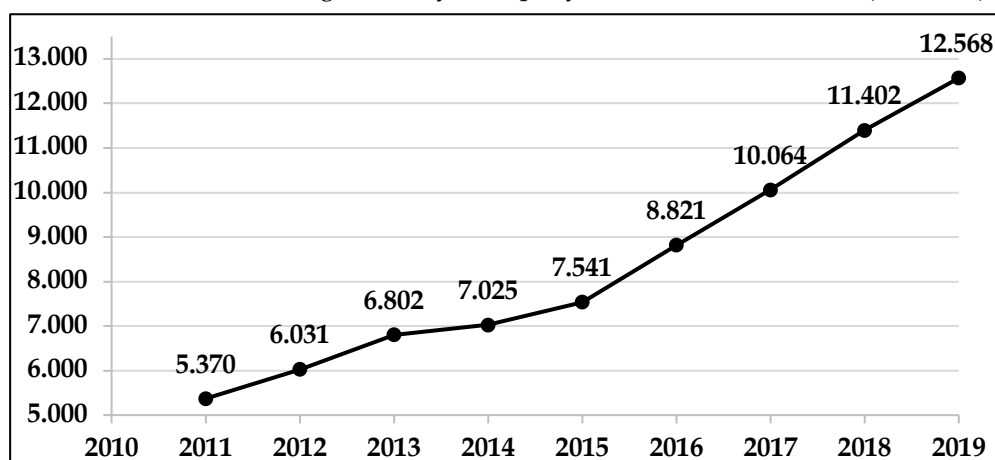
Source: Adapted from MS and SBCBM, 2021.

* The data presented are faithful to the institutions available.

** CB is an operative procedure that is currently being developed in great frequency due to several factors and, thus, variation(s), updating(ões) and expansion(ões) in its values exposed in the present study may occur.

Figure 2 shows the distribution of CB recorded by the SUS, per year, in the historical and geographic cut established in the present production, and increasing ascent is identified. The year 2019 recorded the highest preponderance among those analyzed, registering 16.6% (n=12,568) and the year 2011 the lowest preponderance with 7.1% (n=5,370), respectively.

Figure 2 - Distribution of CB registered by SUS, per year, in Brazil, 2011-2019 (n=75.624):*,**



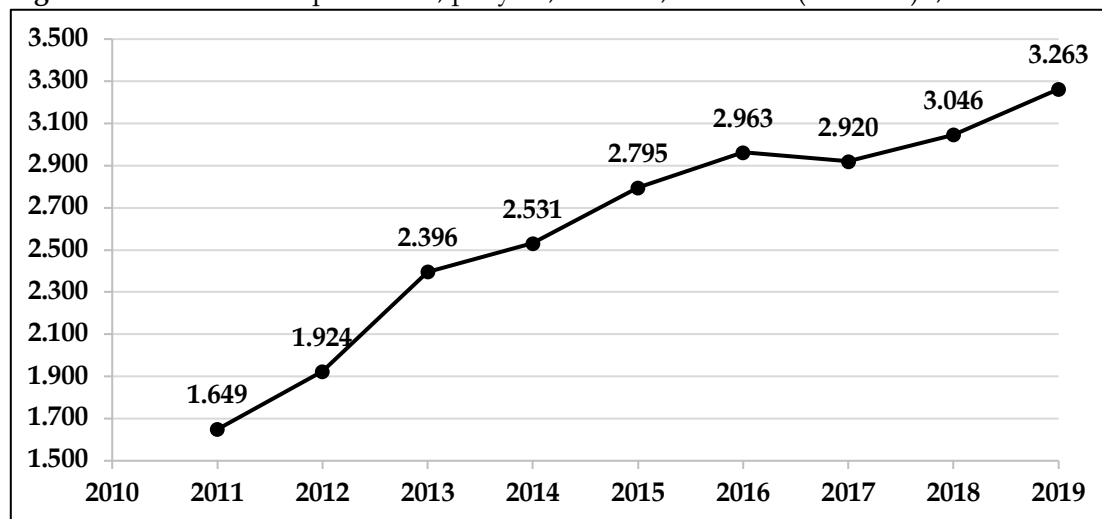
Source: Adapted from MS and SBCBM, 2021.

* The data presented are faithful to the institutions available.

** CB is an operative procedure that is currently being developed in great frequency due to several factors and, thus, variation(s), updating(ões) and expansion(ões) in its values exposed in the present study may occur.

Figure 3 shows the distribution of cb scans financed privately per year, in the historical and geographic section instituted, and it is possible to verify that the year 2019 was the one that recorded the highest preponderance of this surgical procedure with 13.9% (n=3,263) and the year 2011 the lowest with 7% (n=1,649).

Figure 3 - Distribution of private CB, per year, in Brazil, 2011-2019 (n=23.487):*,**



Source: Adapted from MS and SBCBM, 2021.

* The data presented are faithful to the institutions available.

** CB is an operative procedure that is currently being developed in great frequency due to several factors and, thus, variation(s), updating(ões) and expansion(ões) in its values exposed in the present study may occur.

Discussion

The issue of increased CB performance can be understood due to several phenomena, such as the increase in the number of people who are overweight, obese or morbidly obese, worldwide, and this phenomenon is classified as a true pandemic, identified in all age groups.^{1-5,20-21,24} Among the various policies adopted internationally to combat and control obesity and morbid obesity, as well as to combat its impacts, the WHO's "Global Strategy for Food, Physical Activity and Health" can be cited.²⁰

This important international strategy was adopted by the World Health Assembly (MAS) in 2004, which proposed in its body measures to support diets and regularity in the performance of physical activities.²⁰ Another noteworthy action was the creation by WHO of the "Global Plan of Action for the Prevention and Control of Noncommunicable Diseases 2013-2020", aiming to fully respect the commitments of what became known as the United Nations Political Declaration on Noncommunicable Diseases.^{2-3,20}

In relation to the number of CBs performed internationally, the United States (USA) is in first place and Brazil is considered the second country in the world, and women represent approximately 76% of their patients, according to data provided by the SBCBM and the National Association of Private Hospitals (ANAHP).²²⁻²³ To better understand the different forms of organization and financing of this operative procedure in Brazil, it is important to remember some legislative provisions instituted nationally, such as Law number 8,080/90, related to the conditions for the promotion, protection and recovery of health, in

addition to the organization and functioning of the corresponding services.²⁵

In this important law, it is stated in article 1 that it regulates, throughout the national territory, health actions and services, performed alone or jointly, on a permanent or eventual basis, by natural or legal persons governed by public or private law.²⁵ The importance of Law 8.080/90 is such that, in it, it is defended in article 2 that, health is a fundamental right of the human being, and the State must provide the conditions necessary for its full exercise and, in its § 1, it is maintained that it is the duty of the State to guarantee health, because it consists in the formulation and implementation of economic and social policies aimed at reducing the risks of diseases and other diseases and the establishment of conditions that ensure universal and equal access to actions and services for their promotion, protection and recovery.²⁵

Another important document related to the issue of health in Brazil is Law number 8,142/90, which provides for community participation in the management of the SUS and on intergovernmental transfers of financial resources in the health area.²⁶ In this important Law, it is stated that the SUS, which deals with Law No. 8,080/90, will count, in each sphere of government, without prejudice to the functions of the Legislative Power, with the collegiate bodies, being the Health Conference and the Health Council.²⁶

The Complementary Law (LC) number 141/2012, the main percentages of financial investment are presented in relation to the respective municipalities, states and the Union with regard to the SUS, which are defined, resulting from the presidential sanction of the Constitutional Amendment number 29.²⁷⁻²⁸ Thus, and, by this important Law, municipalities and the Federal District (DF) must carry out annually application of at least 15% of their collection in relation to taxes in public health actions and services and, with the states approximately 12%.²⁷⁻²⁸

It is important to present what is defended with the "Charter of The Rights of Health Users", and two of its guidelines are exposed, in the first that, every person has the right to access to goods and services ordered and organized to guarantee the promotion, prevention, protection, treatment and recovery of health and, in the second, that every person has the right to adequate treatment and at the right time to solve their health problem.²⁹ The issue of increased CB performance is also related to the increase in people who are in morbid obesity or obesity, as advocated by the Brazilian Institute of Geography and Statistics (IBGE).³⁰

In its National Health Survey conducted in 2019 (PNS 2019), conducted in partnership with the Ministry of Health, it is argued that approximately seventeen (17) years ago, four out of ten Brazilians were overweight and, in the last information obtained, and at present, there are approximately six out of ten Brazilians in this condition.³⁰ In this interpretative context and according to the information contained in this important research, approximately 96 million Brazilians are overweight and, the result obtained by calculating BMI, points out that they are in the classified range as overweight or obesity.³⁰

The complexity of this public health problem is also related to the total percentage of people with obesity, as presented in this important IBGE production, when it is exposed that it more than doubled in this period, where it previously registered approximately 12.2%, expanding to 26.8%.^{30,31} Another phenomenon that possibly contributes to the increase in the frequency of CB is the process of judicialization of health, as a way of guaranteeing the fundamental

principle that is the right of defense and safeguarding of life.³²

In this sense, several researchers are positioned in their academic productions in relation to this issue, arguing that nowadays, there are several legal processes filed by obese and morbidly obese people to perform this surgical procedure surgical procedure and also revisional plastic surgery after – bariatric surgeries (post-CB).³²⁻³³ Another issue that contributes to the increase in the performance of CB in Brazil, are the efforts made by the national health agency, that is, the Ministry of Health in the fight and control of obesity and morbid obesity, through its policies, strategies and methodologies of action.³⁴

In this context, ordinance number 5 of January 31, 2017 can be cited, which makes public the decision to incorporate the CB procedure by laparoscopy within the scope of the SUS.³⁴ By Ordinance number 482, dated March 6, 2017, the CB procedure by Laparoscopy is included in the Table of Procedures, Medications, Orthotics, Prostheses and Special Materials of the SUS.³⁵

The Federal Council of Medicine (CFM) through Resolution No. 1,766/05, established safe standards for the surgical treatment of morbid obesity, defining indications, accepted procedures and the action team.³⁶ This important document was changed through the resolution of cfm number 1,942/2010, which established safe standards for the surgical treatment of morbid obesity, defining indications, procedures and its team.³⁶⁻³⁷

Another issue that may have contributed to the increase in the frequency of CB was the incorporation with this technique of laparoscopy, and it has been used since 1994, with the technique of the mixed type of gastric bypass in Roux Y.³⁸⁻⁴⁰ This surgical technique for reducing and controlling obesity, combined with laparoscopy technique reduces the possibility of developing complications when compared to the conventional technique, besides being less invasive.³⁸⁻⁴⁰

For some researchers, only surgical procedures named adjustable gastric band (BGA), biliopancreatic leads (BPD) and gastrojejunal bypass gastrojejunal gastroplasty procedures in Roux-y (DGJYR) are currently widely performed worldwide.³⁹⁻⁴¹ In this interpretative context, although these techniques were developed in the mid-1960s, it was only in the late 1990s that a greater interest was aroused in them and, thus, part of this interest is due to the development of access to these surgical procedures, using the laparoscopic technique.³⁸⁻⁴¹

For other researchers, the high interest in performing laparoscopic BC is represented because it constitutes itself as minimally invasive, in addition to the great adherence of surgical professionals to use it in their surgical procedures, because, despite its complexity, it has several positive points in their favor.⁴⁰⁻⁴²

Technically, the beneficial factors of laparoscopic surgeries are, for example, the absence of a large incision, in addition to the use of CO2 and the degree of reduced tissue injury.⁴²⁻⁴⁴ For other researchers, surgeries performed by laparoscopy have advantages such as earlier ambulation of the patient, in addition to the availability of his discharge more quickly, thus allowing the anticipation of the return to his habitual activities, less impairment during the postoperative period of respiratory function, which preserves all the activity of the diaphragmatic body, in addition to the reduced formation of adhesions, and also , pain(s) of lesser intensity.⁴⁴⁻⁴⁶

Another factor that may have contributed to the increase in the performance of BC in Brazil was the contemplation of this procedure in people who are between 16 and 18 years of age, through a specific evaluation and of people who are over 60 years of age, after performing a risk-benefit assessment,

and these criteria were proposed through the GM/MS ordinance of number 425/2013.¹⁶ According to some scholars, in adolescence, in adulthood, and during pregnancy, the phases of higher incidence of obesity are identified, and in this sense, the period in which numerous mechanisms are used for weight loss, such as diets and medication consumption, being the main motivations for performing CB. aesthetics and health.⁴⁷⁻⁴⁸

The problem of obesity and morbid obesity is such that, several are the "unsuccessful" attempts implemented, aiming at weight loss and its maintenance, besides being achieving body weight, considered ideal and not a healthy body weight.⁴⁷⁻⁴⁸ The scientific literature points out that the weight loss generated by CB does not only mean the process of "defatfating", that is, moving from an obese body to a thin body, but rather the person having numerous plans, desires, needs, aspirations and feelings, for example, of pride in having managed to perform the CB, until its opposite, that is, the guilt and frustration of having arrived in this situation.⁴⁸

In a research that analyzed the trajectory of female speople in the search for weight loss using CB, it was verified the great influence of what is known as "body transformation", experienced in the identity of these candidates for the surgical procedure in question.⁴⁸⁻⁴⁹ In this context, it is verified that the patient "creates" for herself, a "new reality", in which, her old desires, habits, customs, values and beliefs, no longer served, needing to be replaced, because the body of an obese or obese morbid person had been "transformed", through the realization of the CB in a thin body, in a very short space of time, aiming to adapt to a new reality, different from that lived up to that moment.⁴⁹

Furthermore, in relation to the increase in CB performed in the geographical and historical section instituted, it can be mentioned the powerful influence on the contemporaneity of the aesthetic issue, in the sense of the "look of the other" towards "my person", which according to some researchers, also strongly mark the decision process for performing this operative procedure of reduction and control of body weight and combat ing obesity.⁴⁹⁻⁵¹ According to the SBCBM, currently the SUS has approximately 85 high complexity care services, for the attention of people with obesity and morbid obesity in 22 states, and the five (5) states of the federation, in which, there are no such services qualified for cb performance are the Amazon (AM), Roraima (RR), Amapá (AP), Rondônia (RO) and also Piauí (PI).⁵² In addition, in Brazil, the costs of obesity and its rights and indirect impacts to public coffers, can reach approximately 2.4% of gross domestic product (GDP), which is estimated at about R\$ 84.3 billion per year (billion/year).⁵²⁻⁵³

Final Consideration

The present research demonstrated an increase in the frequency of CB performed in Brazil from 2011 to 2019, pointing to its importance in combating and controlling obesity and its associated comorbidities in people belonging to all social layers. A greater understanding was also allowed, with regard to the expansion in the performance of the surgical procedure analyzed, due to the increase in the quantity of its different techniques, incorporation of other technologies in its realization and also, in the changes evidenced in society during contemporaneity.

On the other hand, other factors that contributed to the expansion in the performance of CB were also verified, such as the greater availability of services organized and managed by the MS for this purpose, the fight and control of chronic non-communicable diseases (NCDs) associated with and the increase in the Brazilian population universe of people who were overweight, obese and morbidly obese, perceived by government research. The incorporation of people aged sixteen years or older, in addition to people over the age of sixty years, provided that the established safety parameters were observed, also contributed to the increase in the realization of CB in our nation.

Despite presenting some limitations in its constitution, the present research, in addition to meeting the proposed objectives, also offered a genuine contribution in elucidating the phenomenon under analysis. Due to the magnitude and complexity of obesity, morbid obesity and CB, other research and academic productions should be encouraged, aiming to gain greater understanding of this current and disturbing theme.

The patient submitted to this surgical and surgical procedure should also be supported at all times before, during and after the performance of THE, including as a way to reduce the right and indirect impacts of its implementation and in society. Scientific associations and associations, interested and involved with this important and complex process, should redouble their efforts and attention, aiming to allow the availability of this important procedure, in a democratic way, in addition to launching the usas initiatives in mitigation and elimination of all risks and vulnerabilities involved in its realization.

The class bodies, responsible for supervising the professional practice of interdisciplinary, multidisciplinary and transdisciplinary health teams, should also participate in processes and strategies that allow growth and development, including qualitative, related to this surgical procedure of reduction and control of high body weight. In this sense, it is up to society as a whole to develop expanded care and holistic care, so that the obese and morbidly obese person more harmoniously reduced their vulnerabilities, derived from this disease and its numerous comorbidities.

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